

REMARKS

Applicants submit this Amendment in reply to the final Office Action mailed January 23, 2006. By this Amendment, Applicants request that claims 1, 3, 5, 6, and 10 be amended; and that claim 4 be canceled. Accordingly, entry of this Amendment would render claims 1-3 and 5-18 pending in this application. The originally-filed specification, drawings, and claims fully support the subject matter of amended claims 1, 3, 5, 6, and 10. Thus, this Amendment introduces no new matter.

In the Office Action claims 1-4, 6-12, 14, 15, and 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,765,803 to Hirth ("Hirth"). Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Hirth in view of U.S. Patent No. 6,530,978 to McQuigg et al. ("McQuigg"). Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Hirth, in view of "legal precedent." Finally, Claims 16 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hirth in view of U.S. Patent No. 6,193,934 to Yang ("Yang").

Applicants respectfully traverse these rejections for the reasons stated below.

As an initial point, Applicants respectfully request that the finality of the Office Action be withdrawn. In the Office Action dated September 22, 2005, the motivation supporting the obviousness rejection of claims 1, 6, and 10 was stated as:

it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the invention of Hirth to a purification system to remove particulate matter from the exhaust gas of an engine, since the recitation of such amounts to an intended use statement.

Office Action dated September 22, 2005 at page 3 (emphasis added). As noted in Applicants' Reply to Office Action dated December 22, 2005, the claim language identified as intended use statement clearly represents positive limitations to the claims

and thus cannot be properly characterized as a statement of intended use. Accordingly, the 35 U.S.C. § 103(a) rejection presented in the Office Action of September 22, 2005 was improper for failing to provide the requisite motivation to combine. This rejection is repeated verbatim in the outstanding Office Action and thus is also improper for failing to provide the requisite motivation to combine.

The current Office Action attempts to overcome this deficiency by providing a motivation to combine in the Response to Arguments portion of the Office Action. In particular, the Office Action suggests that one of ordinary skill in the art of exhaust gas treatment would recognize that “exhaust gas stream exiting from an internal combustion engine contains unburned particles that must be removed before releasing the gas to the environment.” The Office Action continues, “since an exhaust gas stream of an engine has the same two ingredients . . . required in Hirth, it is at least obvious to one with ordinary skill in the art that the invention in Hirth is applied to an exhaust gas stream originating from an internal combustion engine.” Office Action at page 6-7. This statement that Hirth “is applied to an exhaust gas stream originating from an internal combustion engine” does not cure the deficiency regarding a lack of motivation to combine. Rather, this statement addresses the teachings of Hirth, not the necessary motivation to combine. Applicants submit that the finality of the Office Action is improper and a proper motivation is required for the 35 U.S.C. § 103(a) rejection of claims 1, 6, and 10 . Applicants did not amend any claims in the Reply to Office Action dated December 22, 2005. Therefore, the Examiner is required to present a proper motivation to combine before making the Office Action final. Accordingly, Applicants request withdrawal of the finality of the Office Action.

Applicants note that the Patent Office bears the initial burden of presenting a prima facie case of unpatentability. M.P.E.P. § 2142. A prima facie case of obviousness requires, *inter alia*, that the prior art references, when combined, must teach or suggest every aspect of the claims. M.P.E.P. § 2143.

Hirth does not disclose or suggest each and every aspect of independent claim 1. For example, Hirth fails to disclose, among other things, “altering at least one electrical characteristic of the particulate matter in at least one of the two streams of exhaust gas with an electrode having a non-alternating polarization.” Hirth simply discloses “charging particles with positive and negative ions in an alternating manner with respect to time in a manner such that sequences of alternatingly positive and negative clouds are formed.” Col. 1, line 68 - Col. 2, line 4 of Hirth. Hirth further discloses that “[A]s the gas stream advances, clouds 7 and 8 alternate locally depending on the time-variable (usually sinusoidal) alternating voltage (high voltage) $U \sim$ applied to the electrodes 5 and 6.” Col 2, lines 58-61 of Hirth. In other words, Hirth teaches the use of AC voltage to alternatingly charge particles in the same stream with positive and negative ions. See, e.g., Fig. 1. Nowhere does Hirth disclose or suggest “altering at least one electrical characteristic of the particulate matter in at least one of the two streams of exhaust gas with an electrode having a non-alternating polarization,” as recited in amended claim 1.

The Office Action’s characterization that Hirth could be applied to an internal combustion engine does not remedy the deficiency noted above regarding Hirth. Accordingly, Applicants respectfully request withdrawal of the Section 103(a) rejection

against claim 1. Claims 2 and 3 depend from claim 1 and are therefore allowable for at least the same reasons that independent claim 1 is allowable.

With respect to independent claim 6, Hirth does not disclose or suggest, among other things, “positively charging the entire particulate matter in one of the at least two streams of exhaust gas” and “negatively charging the entire particulate matter in the other of the at least two streams of exhaust gas,” as recited in the claim. As noted above, Hirth simply discloses alternatingly charging particles in the same stream with positive and negative ions. Hirth does not disclose “positively charging the entire particulate matter in one of the at least two streams of exhaust gas” and “negatively charging the entire particulate matter in the other of the at least two streams of exhaust gas. Accordingly, Applicants request that the rejection of independent claim 6 be withdrawn. Claims 7-9 depend from claim 6 and are therefore allowable for at least the same reasons that independent claim 6 is allowable.

For similar reasons presented above, Hirth does not disclose or suggest, for example, “a charging device operable to selectively impart a positive charge to the entire particulate matter in the first exhaust conduit and to impart a negative charge to the entire particulate matter in the second exhaust conduit,” as recited in claim 10. Accordingly, Applicants request that the rejection of independent claim 10 be withdrawn. Claims 11, 12, 14, 15, and 17 depend from claim 10 and are therefore allowable for at least the same reasons that independent claim 10 is allowable.

With respect to dependent claims 5, 13, 16, and 18, the additional teachings relied upon by the Examiner do not overcome the deficiencies noted above regarding

Hirth. Accordingly, Applicants submit that dependent claims 5, 13, 16, and 18 are allowable for at least the same reasons that independent claims 1 and 10 are allowable.

Applicants respectfully request that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 1-3 and 5-18 in condition for allowance.

Applicants submit that the proposed amendments of claims 1, 3, 5, 6, and 10 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

Finally, Applicants submit that the entry of the amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

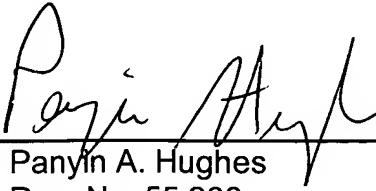
In view of the foregoing remarks, Applicants submit that this claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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By: 

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